ROLE OF MATERNAL SERUM LEVEL OF CANCER ANTIGEN -125 IN THE DETERMINATION OF SEVERITY IN CASES OF SEVERE PRE-ECLAMPSIA

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Introduction

Pre-eclampsia is defined as hypertension that appears after 20 weeks of gestation, in addition to proteinuria or other indicators of injury to end organ damage during pregnancy , is a significant contributor to maternal and perinatal death and morbidity especially when it manifests early. Epidemeology. A pregnancy specific illness ,pre-eclampsia affects 3-5 % of expectant mothers ,high blood pressure, proteinuria and edema are one of its characteristics. Categorization of hypertensive disorders associated with pregnancy .1. Pre-eclampsia.2. Gestational hypertension.3. Super imposed pre-eclampsia.4. Chronic hypertension.Potential causes of pre-eclampsia.1.Advanced maternal age. 2.Obesity.3. Nulliparity.4. Multi fetal pregnancy. 5. Family history of pre-eclampsia. 6. Previous history of pre-eclampsia COMPLICATIONS OF PRE-ECLAMPSIA. Maternal complications. 1.Eclampsia. 2.HELLP SYNDROME. 3.Cardiovascular complications. 4.Renal complications.5.Neurological complications. Fetal complications.1.fetal growth restriction. 2.Premarturity.

Aim of the work

The aim of these study is to analyze the association of CA-125 values as an affordable and widely available , and establish its potential role in evaluation of pre-eclampsia severity.

Patients and Methods

One hundred pregnant women who were admitted to EL-shatby maternity university teaching hospital and visited the outpatient clinic between july 2023-october 2023. GROUP 1. Fifty pregnant women as control group. GROUP 2. Twenty five pregnant women as mild pre-eclampsia. GROUP 3.Twenty five pregnant women as severe pre-eclampsia. Inclusion criteria. -Age range of 18-34yrs. -Singleton gestation. -Within 28-34wks of pregnancy. -Provide precise and necessary first trimester data. Exclusion criteria. 1. Refusal to sign up. 2. Chronic high blood pressure or inability to attend follow up.3. liver and renal illness. 4. Diabetes mellitus. All cases were subjected to Complete history taking. Blood pressure measurement. Ultrasound to asses fetal conditions. CA-125.

Results

Table (1) : Comparison of the three groups under study based on blood pressure

Blood pressure	Total (n=100)	Normal pregnancy 120 - 80 mmHg (n=50)	Mild preeclampsia 140 -<160 mmHg (n=25)	Severe preeclampsia >160 -110 mmHg (n=25)	H	p
Systolic						
Min. – Max.	100.0 – 240.0	100.0 – 130.0	140.0 – 160.0	160.0 – 240.0	85.012*	<0.001*
Mean ± SD.	136.70±26.74	114.40 ± 8.12	145.60 ± 7.12	172.40 ± 17.86		
Median (IQR)	135 (110.0 –160.0)	110 (110.0 – 120.0)	140 (140.0 –150.0)	170 (160.0 – 170.0)		
Sig. bet. grps.	p₁<0.001*,p₂<0.001*,p₃=0.003*					
Diastolic						
Min. – Max.	60.0 – 120.0	60.0 – 90.0	80.0 – 100.0	90.0– 120.0	74.136*	<0.001*
Mean ± SD.	85.60 ± 13.28	75.0 ± 7.89	91.20 ± 5.26	101.20 ± 7.26		
Median (IQR)	90.0 (70.0 –100.0)	70.0 (70.0 – 80.0)	90.0 (90.0 – 90.0)	100 (100.0 –100.0)		
Sig. bet. grps.	p₁<0.001*,p₂<0.001*,p₃=0.012*					

Comparison between the three study groups based on blood pressure aredisplayed on table (5), the blood pressure is increased in severe group(C), compare to (A), and in(B), compare to (A), and in (C) compare to (B), respectively. So P value is statistically significant.

Table (2): Comparison the three groups under study based on to Laboratory results

Laboratory	Total (n=100)	Normal pregnancy (n=50)	Mild preeclampsia (n=25)	Severe preeclampsia (n=25)	Test of sig.	p
Ca–125						
Normal (35IU/ML)	78 (78.0 %)	50 (100.0 %)	25 (100.0 %)	3 (12.0 %)		>0.01*
Increased	22 (22.0 %)	0 (0.0 %)	0 (0.0 %)	22 (88.0 %)		
Sig. bet. grps.	p₁= –,p₂<0.01*,p₃<0.01*					
Min. – Max.	4.40 – 48.0	4.40 – 27.0	6.60 – 29.70	19.0 – 48.0	H=64.113*	>0.01*
Mean ± SD.	22.79 ± 11.14	15.05 ± 5.71	22.64 ± 5.88	38.43 ± 5.55		
Median (IQR)	21 (13.20–29.60)	14.4 (10 – 19.1)	25 (20 – 26)	37.5 (36 – 42)		
Sig. bet. grps.	p₁<0.01*,p₂<0.01*,p₃<0.01*					

Table (3): Comparison of the three groups under under study based on continue laboratory results

	Total (n=100)	Normal pregnancy (n=50)	Mild pre-eclampsia (n=25)	Severe pre-eclampsia (n=25)	Test of sig.	p
ALT						
Normal (15 − 59)	96 (96.0%)	50 (100.0%)	23 (92.0%)	23 (92.0%)	FETc²= 4.648	0.059
Elevated (>59)	4 (4.0%)	0 (0.0%)	2 (8.0%)	2 (8.0%)		
Min. – Max.	5.0 – 173.0	5.0 – 42.0	8.0 – 68.0	6.0 – 173.0	H=8.924*	0.012*
Mean ± SD.	20.67 ± 23.81	15.02 ± 6.80	18.96 ± 17.12	33.68 ± 41.28		
Median (IQR)	14.50 (10.0–20.50)	13.50 (10.0–19.0)	10.0 (9.0–23.0)	20.0 (14.0– 33.0)		
Sig. bet. grps.	p₁=0.695,p₂=0.08*,p₃=0.08*					
AST						
Normal (15 − 37)	90 (90%)	49 (98%)	23 (92%)	18 (72%)	FETc²= 10.963*	0.002*
Increased	10 (10%)	1 (2%)	2 (8%)	7 (28%)		
Min. – Max.	7.0 – 513.0	7.0 – 38.0	10.0 – 41.0	12.0 – 513.0	H=5.880	0.053
Mean ± SD.	32.92 ± 51.85	25.12 ± 8.21	23.84 ± 8.93	57.60 ± 100.1		
Median (IQR)	27.50 (18-33)	25.0 (19 - 32)	26.0 (15 - 29)	32.0 (20 - 47)		
P.CR						
Min. – Max.	0.10 – 1.60	0.10 – 0.90	0.12 – 1.0	0.17 – 1.60	H= 22.550*	<0.001*
Mean ± SD.	0.37 ± 0.30	0.28 ± 0.23	0.32 ± 0.25	0.60 ± 0.35		
Median (IQR)	0.21 (0.16– 0.56)	0.18 (0.15–0.21)	0.21 (0.16-0.35)	0.56 (0.30–0.75)		
Sig. bet. grps.	p₁=0.297, p₂<0.001*,p₃=0.001*					

Conclusion

1.Compared to the mild and normal groups, the maternal serum CA-125 level was found to be considerably greater in severe pre-eclampsia.
2.In severe categories there is a positive association between the systolic and maternal serum ca-125 level

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